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20995 7590 03/13/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER KUNAMNENI, HARI P	
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			2109	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/13/2007.

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## Office Action Summary

Application No.

10/674,848

Applicant(s)

KIM ET AL.

Examiner

Hari Kunamneni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date March 3, 2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

***Drawings Objections***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

- a. On page 21, line 1 with reference to FIG 4, terminal 50 was referenced, however, there is no terminal 50 in FIG. 4.
- b. On page 22, line 24, terminal 50 was referenced, however no such terminal was found in the drawings.
- c. On page 23, line 12, refers to FIG. 1 with respect to region A, broadcasting server 10, no such items are found in FIG. 1.
- d. On page 22, line 24 and page 21, line 1 refers to terminal 50, cannot be found in FIG's.
- e. On page 25, line 17, refers to FIG. 3 and a multicast box servers (52,54) ... etc. However, no items 52 and 54 found in FIG. 3.

The drawings are objected to because the description in the specification does not match the drawings:

- a. BROADCASTING RECEIVING UNIT is identified as 113 in FIG 2., however in the description BROADCASTING RECEIVING UNIT is referenced as 114 (Page 16, Line 1, 4, 10 and 23; page 17, Line 2; page 19, line 22; page 22 line 15 and 21; Page 23, line 7; and etc.)

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b. DATA PROCESSING/DISPLAYING UNIT is identified as 114 in FIG. 2, however in the description DATA PROCESSING/DISPLAYING UNIT is referenced as 116 (Page 16, Line 3, 20 and 21; page 17, line 3; page 22, lines 5, 18 and 19; and etc.).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claim 10 is objected to because of the following informalities:

Claim 10, line 1 state that, "The method a defined in claim 7 ..." and in line 7, claim 10 states that, "getting to step 8". There is no step 8 in claim 7, however, there is a step 8 in claim 9.

Appropriate correction is required.

Examiner as assumed that claim 10 is actually dependant upon claim 9. Based on this further examination of the application is performed.

Claim 1, line 9, states that, "whether xDSL service device", is introduced without an article, "a". Line 13-14, "the xDSL service providing equipment"; therefore it is not clear if both are referring to the same or not.

Claim 1 and 14, line 3, refers to, "a first xDSL connector terminal" and in line 5, refers to, "the first digital subscriber line (xDSL) connector ...". The second reference lacks antecedent basis.

For claim 7 and 17, lines 5 and 20, state that, "moving along with xDSL server ...", the meaning of the word moving along is not clear. Use of the word determining xDSL server may be appropriate.

Claim 7 and 17; line 19 states that, "the second xDSL connector terminal", lack the antecedent basis.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph as being indefinite.

Claim 1 and 14, line 4, states that, "xDSL server (B-RAS)", the description in the parenthesis goes from general to specific. Examiner is confused by xDSL server, if the applicant means a server connected to the xDSL or a server that is capable of broadband i.e. transmission of data over numerous frequencies. Therefore, the claim is rejected under 112, 2<sup>nd</sup> Para.

Claim 1 and 14, lines 7-8 state, "prompting the contents providing server to **broadcast** multicasting data to the xDSL server in real time (step 2)". , when data is sent from one source to one destination generally accepted term in the art is unicast. In the current instance, applicant is sending the data from content providing server to xDSL server (B-RAS). Examiner is confused, if applicant really means broadcast (directed broadcast to the network) or actually a unicast. Therefore, the claim is

rejected under 112, 2<sup>nd</sup> Para as particularly pointing out what the applicant's invention is. Examiner is assuming that applicant is performing unicast from content providing server to relevant B-RAS.

Claim 1 and 14, lines 11-15, state, "prompting xDSL server to **broadcast** the multicasting data to the first xDSL connector terminal in real time and receive the broadcasting data from the first xDSL connector terminal at a **multicasting address** ...", it is unclear how both broadcast and multicasting addresses can be present in the same protocol data unit. Examiner has assumed that data is broadcasted in layer 2, and terminal is selecting the broadcasted data packets, based on multicast address present in layer 3.

For Claims 1 and 14, line 6 state that, "... a desired contents ..."; It is not clear if the following references are referring to the same selected desired contents are not:

- i. Claim 1 and 14, line 5, state that, "multicasting data"; line 12 states that, "the multicasting data"; line 20 state that, "the multicasting data";
- ii. Claim 2 and 15, line 2-3 states that, "multicasting broadcasting data";
- iii. Claim 3 and 16, line 6 states that, "multicasting broadcasting data";

iv. Claim 6, line 7 states that, "multicasting broadcasting data"; line 8 states that, "the broadcasting data"; line 10 states that, "the multicasting broadcasting data".

Therefore, the claims 1-6 and 14-16 fail to particularly point out and distinctly claim, which the applicant considers to be his invention.

Claim 2, line 3, states that, "the xDSL server", it is not clear which xDSL server is being referred to; one belonging to first xDSL connector terminal, the one belonging to second xDSL connector terminal or both the first and second xDSL connectors are connected to the same xDSL server?

Claim 4, lines 1-4 state that, "... the first xDSL connector ... is the second or other subsequent ADSL connector"; There is no antecedent basis for this reference. It is not clear if these are the same that were introduced in claim 1, line 3 ("a first xDSL connector terminal") and line 16-17 ("a second xDSL connector terminal").

Claim 5, line 7 states that, "... the multicast box (server) ...", lacks antecedent basis.

Claim 5 is reads as follows:

"The method as defined in claim 4, wherein step 1 further comprises the steps of:



Selecting desired contents in a relevant web server when the first ADSL connector designates (uploads) an Internet address (URL) and is connected with the web server (step 8);

prompting a relaying function performing program (Troute.cab file) to download at the terminal of the first ADSL client (step 9); and

prompting the first ADSL connector to communicate with an internet broadcasting program (CAST 365 program) of a multicasting broadcasting transmitting media server through the relaying function performing program and prompting the internet broadcasting program to induce the first ADSL connector terminal to the multicast box (server) of the ADSL server (B.RAS) to which the first ADSL client connector terminal belongs (step 10)."

Following is the interpretation of the examiner of the above-mentioned claim:

- i. the first ADSL connector terminal connects to web-server by uploading an URL
- ii. the first ADSL connector terminal Download Troute.cab file, which is a relaying function performing program
- iii. the first ADSL connector terminal communicates with internet broadcasting program and then connects to relevant box server.

Due to lack of action to be performed "to induce", it is assumed that it is attempting to make a connection. However, this interpretation, leads

to a claim element with no inter-relationship between the step 1 and other steps of claim 1 (steps 2-5). Therefore, this claim lacks the essential element, and is rejected under 112, 2<sup>nd</sup> Para.

Since claim 6 is dependant upon claim 5, claim 6 is also rejected under USC 112, 2<sup>nd</sup> Para, being indefinite. Claims 5 and 6 are not examined on merits.

Claims 5 and 6 are not examined on the merits.

Claim 6, line 4, states that, "... when a multicast box of an ADSL server (B-RAS) ...", It is not clear, if a new ADSL server is being introduced or an existing server is being used.

Claim 6, line 11 states that, "... with the multicast box", lacks antecedent basis for multicast box.

Claim 7, line 3, states that, "... a first xDSL connector ..." and in lines 11,12 states that, "the first xDSL connector terminal ...". It is not clear if all of them are the same.

Claim 7 and 17, line 7, states that, "... desired contents"; in line 8, states that, "multicasting data"; in line 15, states that, "multicasting data"; It is not clear if all of them are referring to the same data or not.

Claim 8 and 18, line 3, states that, "the multicast box server", lacks antecedent basis.

Claim 9 and 19, line 2-3, and 7-8, states that, "... a multicasting data transmission command ...", it is not clear if it is the same command introduced in the independent claim, from which the claim depends.

Claim 9, lines 9-10 and lines 12-13 states that, "... multicasting broadcasting data ...", it is not clear if it is the same data as introduced in claim 7, line 7, "desired contents" or in line 8, "multicasting data".

For claim 10, line 4, states that, " multicast box (server) moving along ...", the meaning of the word moving along is not clear. Use the word determining the xDSL server may be appropriate.

Since 7 is rejected, the dependant claims 8-12 also rejected.

Since claim 17 is rejected, the dependant claims 18-19 also rejected.

Claim 13, line 5, states, " ... when a modem connector is accessed ", It is not clear if it is the same modem connector introduced in line 1, or a different one.

Claim 13, line 4 states that, "... to broadcast [missing the article 'a'] multicasting broadcasting data ...", the claim element is being introduced

without an article, "a". On line 6 states that, "... broadcast [missing the article 'the'] multicasting broadcasting data ...", missing the article "the".

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-20 are rejected under 35 U.S.C. 101.

Claims 1-13 are rejected under 35 U.S.C. 101 because they are statutory method (process) claims that fall under judicial exception of implementing an abstract idea (prompting and discriminating, etc.) without a tangible (real world) output.

Claims 14-20 are rejected under 35 U.S.C. 101 because, they are non statutory subject matter (they are software implementations (functions for prompting, discriminating, etc.)).

Claim 7 is rejected under 35 U.S.C. 101 because it is inoperative.

Claim 7, lines 1-17, states, "prompting the multicast box (server) to broadcast multicasting data through the xDSL service device to the first

xDSL connector when xDSL service device supports multicasting data as a result of success at step 4 (step 5); “

Since the data is broadcasted from the multicast box server, client will not be able to select the data from the broadcast address. Therefore, the claim fails to provide the multicasting data to the client, i.e. first xDSL connector terminal.

Claim 9,10,11 and 12 are rejected, as they are dependant claim 7 and does not rectify the above-mentioned utility requirement of the claim.

Claim 14, 17, and 20, line 1, states, “ A recording medium readable ...”, in accordance with Applicants specification (page 35, lines 8-9, “... magnetic optical disc or the like)”, or the like could include an medium. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. Instead, it includes medium. Medium does not fall within a statutory category since it is clearly not a series of step or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

Claim 15, 16, 18 and 19, line 1, states, “ The medium as defined in ...”, in accordance with Applicants specification (page 35, line 8-9, “...

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magnetic optical disc or the like)", or the like could include an medium.

This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. Instead, it includes medium.

Medium does not fall with in a statutory category since it is clearly not a series of step or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

Note that amending above claims to recite –computer storage medium—would overcome this rejection in a matter consistent with Applicant's specification with respect to rejection under previous two Para's.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claim 1, 2, 3, 4, 8, 13, 14, 15, 16 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nurenberg et al (US 6181697 B1).

For claim 1 and 14, Nurenberg et al. teaches:

prompting a contents providing server to induce a first xDSL connector terminal to an xDSL server (B-RAS) to which the first xDSL connector terminal belongs when the first digital subscriber line (xDSL) connector gets an access to the content providing server to select a desired contents (step 1) ( FIG 4A, steps 406, 407, 408, and 409 in conjunction with, column 4, lines 2-6, " Specifically, each MUS through interaction with client software on the client on the unicast IP network enables such client to join a group on the IP Multicast network by providing information relating to what sessions are in progress or scheduled on the network 101", this is equivalent to enabling first xDSL connector to select desired contents);

prompting the contents providing server to broadcast multicasting data to the xDSL server in real time (step 2) (Column 4, lines 29-33 , "... once client terminal 111-1 connected to Unicast network 107, has joined a Multicast session on IP Multicast network 101 and commenced receiving and/or transmitting packets on the Muticast session through MUS 120", this is equivalent to contents providing server to multicast data to the xDSL server (B-RAS) in real time, since B-RAS is the distributor of multicast data to the client);

discriminating whether xDSL service device belonging to the xDSL server can support a multicasting broadcast (step 3), (FIG 4B, step 411, Client senses multicast interfaces to determine whether packets for session from re-multicasting source or from a multicast router (as described in the abstract last two lines, "... or a Multicast router is not forwarding packets from the session onto the sub-network", i.e. discriminating if the multicast is supported).

prompting the xDSL server to broadcast the multicasting data to the first xDSL connector terminal in real time and receive the broadcasting data from the first xDSL connector terminal at a multicasting address if the xDSL service providing equipment supports the multicasting broadcast as a result of the discrimination at the prior step (step 4) (FIG 4B, step 413, "Client Joins session on address re-multicaster is re-multicasting the session (could be a multicast router is forwarding the packets from the session onto the sub-network, Abstract, last two lines, "... or a Multicast router is not forwarding packets from the session [there is a possibility that multicast router could forward the packets into the sub-net] onto the sub-network") in conjunction with column 3, lines 45-52, " The client terminals 110 and 115, for example can be connected to networks 107 or 108 over a Plain Old Telephone Service (POTS) dial-up connection(Modem), an ISDN connection or an Asynchronous Digital Subscriber Loop (ADSL) connection, each to a Local Exchange Carrier (LEC)(not shown), and from there to an Internet Service Provider (ISP)(not



shown), which in turn is connected to the Unicast IP network.", i.e. items 112 and 116 can be DSLAM or a POTS modem interface).

prompting the contents providing server to induce a second xDSL connector terminal to a xDSL server (B-RAS) to which the second xDSL connector terminal belongs, when the second xDSL connector gets an access, after completion of the prior step, and to relay the multicasting data from a xDSL service device belonging to a relevant xDSL server to the second xDSL connector terminal (step 5) (in FIG. 1, item 121 can be RAS that is connected to DSLAM. This will result in obtaining the data by relay from item 121 to 115, when 115 is connected to a xDSL line.).

For claim 2 and 15, Neuranberg et al teaches,

The method in claim 1, further comprising a step (step 6) of prompting the terminal of the first xDSL connector receive multicasting broadcasting data one-on-one in real time from the xDSL server (it can be assumed MUS is the xDSL server) when the xDSL service device does not support the multicasting as a result of the discrimination at step 3 (In FIG 4B, Step 412, When multicasting is not supported, the data is received by joining on the alternate socket (step 414), translate multicast address to unicast address of client (step 415) and send multicast data to client if it need not be re-multicast (step 416) ).

For claim 3 and 16, Nurenberg et al teaches:

The method as defined in claim 1 (see discussion supra for claim 1) further comprising a step (step 7) of prompting the content provider to induce the terminal of the second xDSL user to an xDSL server (B-RAS) to which the terminal of the second xDSL connector belongs after completion of step 4, when the second xDSL get in connection, and prompting the terminal of the second xDSL connector to receive the multicasting broadcasting data from the xDSL server one-on-one in real time when there is no on air multi-broadcasting packet in the xDSL service device of the relevant xDSL server ( FIG 4B, step 412, when there are no multicast packets are detected, the second xDSL connector receives the data from xDSL server, if the MUS is the xDSL server, from steps 414, 415, and 416 as explained supra).

For claim 4, Nurenberg et al teaches:

the method as defined in claim 1 ( see supra for discussion under claim 1), wherein the first xDSL connector is an initial ADSL connector that is connected with a web server and the second xDSL connector is the second or other subsequent ADSL connector (Applicant admits that plurality of users will be served by single DSLAM (Page 5, lines 9-10 , "ADSL Service Mechanism (DSLAM); a plurality of users"). Nurenberg et al teaches that end terminal can be ADSL connection, " ", therefore there could be multiple end terminals connected to the DSLAM and first

connector can be the first one and second connector can be subsequent or other terminals).

For claim 8, nurenberg et al teaches:

The method as described in claim 7, (Claim 7 as follows:

A multicast relay method under a digital subscriber line (xDSL) environment, the method comprising the step of:

Prompting a contents providing server to tract a first xDSL connector internet address and discriminate the existence of a multicast box (server) moving along with a xDSL server (B-RAS) to which the first xDSL connector belongs when a digital subscriber line (xDSL) connector is connected with the contents providing server to select a desired contents (step 1)(FIG 4A, steps 406, 407, 408, and 409 in conjunction with, column 4, lines 2-6, " Specifically, each MUS through interaction with client software on the client on the unicast IP network enables such client to join a group on the IP Multicast network by providing information relating to what sessions are in progress or scheduled on the network 101", this is equivalent to enabling first xDSL connector to select desired contents and joining relevant DSLAM box server (MUS) IP address to join the selected group IP address)

Prompting the contents providing server to transmit multicasting data to a relevant multicast box (server) in real time (step 2) (once the IP address of the DSLAM box server address is joined into the multicasting group, when multicast occurs, the box server will receive the data).

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Prompting multicast box (server) to make a multicasting data transmission command to the first xDSL connector terminal (step 3)

Prompting the first xDSL connector terminal to make a multicasting attempt to a xDSL service device of the xDSL server according to the multicasting data transmission command (step 4) (above 2 claim elements are equivalent to sensing whether DSLAM interface supports multicast or not as shown in FIG 4B, step 411)

) further comprising a step of prompting the first xDSL connector terminal to receive multicasting broadcasting data from the multicast box (server) one-on-one in real time as a result of failure in the attempt at step 4, when the xDSL service device does not support multicasting (step 7) (as shown in FIG 4B, step 412, failure of DSLAM supporting multicast, step 414 JOIN session on alternate socket of MUS, step 415 deliver data by unicast to the client)

prompting the contents providing server to induce the second xDSL connector terminal to a multicast box (server) moving along with an xDSL server (B-RAS) to which the second xDSL connector terminal belongs when the second xDSL connector gets an access after completion of step 5 and to relay multicasting data to the second xDSL connector terminal through xDSL service device of a relevant xDSL server (step 6) (as described in steps 1 and 2 the contents are selected; and data is relayed either by step 415 and 414 or through step 413)

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For claims 13 and 20, Nurenberg et al. teaches:

A multicasting relaying method under the modem environment, the method comprising the steps of:

- a. prompting a contents providing server to induce a modem connector terminal to a server (NAS) to which the modem connector terminal belongs when a modem connector is accessed (step 1) (Nurenberg et al. teaches, that clients can be connected with a modem that would enable them to select the multicast broad cast content, column 3, lines 5-46, "The client terminals 110 and 115, for example can be connected to networks 107 or 108 over a plain old Telephone Service (POTS) dial-up connection, ...".)
- b. prompting the contents providing server to broadcast multicasting broadcasting data to the server (step 2) (Column 4, lines - , "... once client terminal 111-1 [In this instance the client is 105] connected to Unicast network 107, has joined a Multicast session on IP Multicast network 101 and commenced receiving and/or transmitting packets on the Muticast session through MUS 120", this is equivalent to contents providing server to broadcast multicasting data to the server the modem has dialed into).

c. prompting the server to broadcast multicasting broadcasting data to the modem connector terminal one-on-one in real time (step 3)( once the modem connected server receive the data for modem connected client, it will deliver the data to the modem client).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neurenberg et al in view of Plummer publication of Internet Broadcasting protocols (page 2, copy provided).

Regarding claim 7, Neurenberg et al teaches the following:

A multicast relay method under a digital subscriber line (xDSL) environment, the method comprising the step of:

Prompting a contents providing server to tract a first xDSL connector internet address and discriminate the existence of a multicast box (server) moving along with a xDSL server (B-RAS) to which the first xDSL connector belongs when a digital subscriber line (xDSL) connector is connected with the contents providing server to select a desired contents (step 1)(FIG 4A, steps 406, 407, 408, and 409 in conjunction

with, column 4, lines 2-6, " Specifically, each MUS through interaction with client software on the client on the unicast IP network enables such client to join a group on the IP Multicast network by providing information relating to what sessions are in progress or scheduled on the network 101", this is equivalent to enabling first xDSL connector to select desired contents and joining relevant DSLAM box server (MUS) IP address to join the selected group IP address)

Prompting the contents providing server to transmit multicasting data to a relevant multicast box (server) in real time (step 2) (once the IP address of the DSLAM box server address is joined into the multicasting group, when multicast occurs, the box server will receive the data).

Prompting multicast box (server) to make a multicasting data transmission command to the first xDSL connector terminal (step 3) (FIG 1, Item 120 is the Box server and FIG 4A, step 410 is the command to sense if the DSLAM supports multicasting or not);

Prompting the first xDSL connector terminal to make a multicasting attempt to a xDSL service device of the xDSL server according to the multicasting data transmission command (step 4) (equivalent to sensing whether DSLAM interface supports multicast or not as shown in FIG 4B, step 411)

prompting the contents providing server to induce the second xDSL connector terminal to a multicast box (server) moving along with an xDSL server (B-RAS) to which the second xDSL connector terminal belongs

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when the second xDSL connector gets an access after completion of step 5 and to relay multicasting data to the second xDSL connector terminal through xDSL service device of a relevant xDSL server (step 6) (as described in steps 1 and 2 the contents are selected; and data is relayed either by step 415 and 414 or through step 413)

Neurenberg et al explicitly teaches the limitations as disclosed above except for step 5, the use of broadcasting for transfer of multicasting data.

The general concept of transmitting data by broadcasting is well known in the art as illustrated in Internet Broadcast Protocols section 3.

It would have been obvious to one in ordinary skill in the art to modify Neurenberg et al to incorporate the use of broadcasting transmission in order to implement a news wire service as taught in Internet broadcast Protocols (Page 1, Section 1, first Para, lines 1-2, "At least two applications of the broadcast mechanism have come into view: a 'news Wire' service ...").

5. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neurenberg et al in view of rsh (a copy provided), Plummer publication of Internet Broadcasting protocols (page 2) and Multicast over TCP/IP HOWTO (page 4).



Neurenberg et al explicitly teaches the limitations as disclosed above, everything of claim 9, except for determining DSLAM can multicast by multicasting in to a command region and sending a command from Content Providing server to send a command to determine if the DSLAM supports the multicasting. As a side note, "prompting the contents providing server to send a multicasting data transmission command to the first xDSL connector terminal if there is no multicast box (server) in xDSL server to which the first xDSL connector belongs as a result of the discrimination at step 1 (step 8) is inherent in Neurenberg et al., because sensing presence of multicast happens after the confirmation is received from the MUS (FIG 4A, step 410, HTTP SERVER SENDS CONTROL MESSAGE TO CLIENT TO INFORM CLIENT HOW TO SEND/RECEIVE INFORMATION TO GROUP(s) SELECTED, i.e. step 8 of claim 9)

The general concept of using rsh to send a command to a computer device is well known in the art as illustrated by rsh (page 1, line 6, "rsh ... host [command]").

It would have been obvious to one ordinary skill in the art at the time of invention to modify Neurenberg et al. to use rsh in order to execute commands on remote computers as taught by rsh (page 1, line 8, "the rsh utility executes command on host").

The general concept of determination whether a device multicast capable is well known in the art as illustrated in Multicast over TCP/IP HOW TO ("... 224.0.0.1 is the all-hosts group. If you ping that group, all multicast capable hosts on the network should answer, as every multicast capable host must join that group at start-up on all it's multicast capable interfaces." page 2, fourth Para. Sending a ping command (step 9 of claim 9) with an address of 224.0.0.1 is equivalent to sending a multicast into a command region, because this will command the multicast capable devices to send an ICMP message (step 10 of claim 9) to first xDSL terminal is equivalent to receiving response; step 11 of claim 9 is taught in FIG 4B, steps 414 and 415).

It would have been obvious to one ordinary skill in the art at the time of invention to modify Neurenberg et al to determine if DSLAM is multicast capable in order to perform experiments as taught in RFC 1112 (section 5, first Para, line 6, "This model is for expository purposes only, ...").

Regarding claim 10 Nuernberg et al. further teaches:

The method as described in claim 9 (see supra for the correction, and discussion of teaching of claim elements) where in the step 6 further comprises the steps of:

Prompting contents providing server to track an internet address of the second xDSL connector and check a multicast box (server) moving along with the xDSL server (B-RAS) to which the second xDSL connector belongs when the second xDSL connector get in connection step 12)(This is equivalent MUS joining the multicast session to receive the multicast broad cast data)

Getting to step 8 if there is no relevant multicast box (server) as a result of discrimination at step 12 (step 13) (MUS is not acting as box server).

Discriminating the possibility of broadcasting data transmission due to a prior connecting being available at the relevant multicast box (server) when there is available relevant multicast box (server) as a result of discrimination at step 12 (step 14) (FIG 4A, step 411);

Transmitting IP information and subscriber program of the relevant multicast box (server) to the second connector terminal from the multicast box (server) to which the second xDSL connector belongs if there is an available prior connector in the relevant multicast box (server) to make it possible to transmit broadcasting data as a result of discrimination at step 14 (step 15) (FIG 4B, step 412, condition YES);

Discriminating whether the second xDSL connector can receive multicasting data by IP multicasting at the xDSL service device to which the second xDSL connector belongs through the subscriber program (step 16) (FIG 4A, step 411)

Prompting the second xDSL connector terminal to receive multicasting broadcasting data by IP multicasting at the xDSL service device to which the second xDSL connector terminal itself belongs if it is possible to receive multicasting packet data by IP multicasting at the relevant xDSL service device as a result of discrimination at step 16 (step 17) (FIG 4A, step 413);

Prompting the second xDSL connector terminal to receive multicasting broadcasting data from the multicast box (server) one-on-one if it is impossible to receive multicasting packet data by IP multicasting at the xDSL service device as a result of discrimination at step 16 (step 18) (FIG. 4B, steps 414 and 415);

Advancing to step 2, if there is no prior connector available at the relevant multicast box (server) to make it impossible to transmit broadcasting data as a result of discrimination at step 14 (step 19);

Further Regarding claim 11, Nuerenberg et al teaches:

The method as defined in claim 10 (see claim 10, supra for discussion), wherein the multicasting data transmission command is a command for transmitting the multicasting information to an imaginary IP (D-Class) region to enable the connectors in one router region to receive multicasting broadcasting information wherein all connector are allowed to receive the broadcasting information at the xDSL service device when a connector who regards the xDSL service device as one router region to receive a signal

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transmits a broadcasting information (frequency signal) to D-Class region to prompt the xDSL service device to assist the multicasting. (In other words, the command is to re-multicast multicast data to a multicast address (D-class address) by the first DSL connector terminal with help of DSLAM, as per FIG 4B, step 417, "CLIENT TRANSLATES SESSION PACKET UNICAST ADDRESS TO 'MULTICAST ADDRESS'", i.e. to multicast multicasting information at an multicasting address to all subnet clients, where subnet could be a DSLAM, "The client terminal 110 and 115, for example, can be connected to networks 107 or 108 over a Plain Old Telephone network (POTS) dialup connection, an ISDN connection, or an Asynchronous Digital Subscriber Loop (ADSL) ...", column 3, lines 45-49).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hari Kunamneni whose telephone number is (571)274-1592. The examiner can normally be reached on Monday thru Friday 7:30-5:00 PM alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, FRANTZ JULES can be reached on (571 )272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Hpk  
2/5/2007

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